

§ 98.203

40 CFR Ch. I (7-1-11 Edition)

- (3) The fluorinated ketone, FK 5-1-12.
- (4) Carbon dioxide (CO₂).
- (5) Any other GHGs (as defined in § 98.6).
- (b) You must report under subpart C of this part (General Stationary Fuel Combustion Sources) the CO₂, N₂O, and CH₄ emissions from each combustion unit by following the requirements of subpart C.

§ 98.203 Calculating GHG emissions.

- (a) Calculate the mass of each GHG emitted from magnesium production or

processing over the calendar year using either Equation T-1 or Equation T-2 of this section, as appropriate. Both of these equations equate emissions of cover gases or carrier gases to consumption of cover gases or carrier gases.

- (1) To estimate emissions of cover gases or carrier gases by monitoring changes in container masses and inventories, emissions of each cover gas or carrier gas shall be estimated using Equation T-1 of this section:

$$E_x = (I_{B,x} - I_{E,x} + A_x - D_x) * 0.001 \quad (\text{Eq. T-1})$$

Where:

- E_x = Emissions of each cover gas or carrier gas, X, in metric tons over the reporting year.
- I_{B,x} = Inventory of each cover gas or carrier gas stored in cylinders or other containers at the beginning of the year, including heels, in kg.
- I_{E,x} = Inventory of each cover gas or carrier gas stored in cylinders or other containers at the end of the year, including heels, in kg.
- A_x = Acquisitions of each cover gas or carrier gas during the year through purchases or other transactions, including heels in cylinders or other containers returned to the magnesium production or processing facility, in kg.
- D_x = Disbursements of each cover gas or carrier gas to sources and locations outside the facility through sales or other transactions during the year, including heels in cylinders or other containers returned by the magnesium production or processing facility to the gas supplier, in kg.
- 0.001 = Conversion factor from kg to metric tons
- X = Each cover gas or carrier gas that is a GHG.

- (2) To estimate emissions of cover gases or carrier gases by monitoring changes in the masses of individual containers as their contents are used, emissions of each cover gas or carrier gas shall be estimated using Equation T-2 of this section:

$$E_{GHG} = \sum_{p=1}^n Q_p * 0.001 \quad (\text{Eq. T-2})$$

Where:

- E_{GHG} = Emissions of each cover gas or carrier gas, X, over the reporting year (metric tons).
- Q_p = The mass of the cover or carrier gas consumed (kg) over the container-use period p, from Equation T-3 of this section.
- n = The number of container-use periods in the year.
- 0.001 = Conversion factor from kg to metric tons.
- X = Each cover gas or carrier gas that is a GHG.

- (b) For purposes of Equation T-2 of this section, the mass of the cover gas used over the period p for an individual container shall be estimated by using Equation T-3 of this section:

$$Q_p = M_B - M_E \quad (\text{Eq. T-3})$$

Where:

- Q_p = The mass of the cover or carrier gas consumed (kg) over the container-use period p (e.g., one month).
- M_B = The mass of the container's contents (kg) at the beginning of period p.
- M_E = The mass of the container's contents (kg) at the end of period p.

- (c) If a facility has mass flow controllers (MFC) and the capacity to track and record MFC measurements to estimate total gas usage, the mass of each cover or carrier gas monitored may be used as the mass of cover or carrier gas consumed (Q_p), in kg for period p in Equation T-2 of this section.